



# Motorola TO-220

## PLASTIC POWER TRANSISTORS

For lead mounted applications or use  
with heat sinks; power dissipation  
of 40 to 100 watts at 25°C case.

STYLE 1:

- PIN 1. BASE  
2. COLLECTOR  
3. EMITTER  
4. COLLECTOR

I <sub>C</sub> (cont) Amps	V <sub>CEO(sus)</sub> Volts	Device Type		h <sub>FE</sub> Min/Max	I <sub>C</sub> Amp	Resistive Switching			f <sub>T</sub> MHz	P <sub>D</sub> (Case) Watts @ 25°C
		NPN	PNP			t <sub>s</sub> us Max	t <sub>f</sub> us Max	I <sub>C</sub> Amp		
0.5	350	MJE2360T MJE2361T		15 min 40 min	0.1 0.1				10 typ 10 typ	30 30
1	40	TIP29	TIP30	15/75	1	0.6 typ	0.3 typ	1	3	30
	60	TIP29A	TIP30A	15/75	1	0.6 typ	0.3 typ	1	3	30
	80	TIP29B	TIP30B	15/75	1	0.6 typ	0.3 typ	1	3	30
	100	TIP29C	TIP30C	15/75	1	0.6 typ	0.3 typ	1	3	30
	250	TIP47		30/150	0.3	2 typ	0.18 typ	0.3	10	40
	300	TIP48		30/150	0.3	2 typ	0.18 typ	0.3	10	40
	350	TIP49		30/150	0.3	2 typ	0.18 typ	0.3	10	40
	400	TIP50		30/150	0.3	2 typ	0.18 typ	0.3	10	40
2	60	TIP110†	TIP115†	500 min	2	1.7 typ	1.3 typ	2	25**	50
	80	TIP111†	TIP116†	500 min	2	1.7 typ	1.3 typ	2	25**	50
	100	TIP112†	TIP117†	500 min	2	1.7 typ	1.3 typ	2	25**	50
3	40	TIP31	TIP32	25 min	1	0.6 typ	0.3 typ	1	3	40
	60	TIP31A	TIP32A	25 min	1	0.6 typ	0.3 typ	1	3	40
	75	MJE1909		20/150	0.5				100	10
	80	TIP31B	TIP32B	25 min	1	0.6 typ	0.3 typ	1	3	40
	100	TIP31C	TIP32C	25 min	1	0.6 typ	0.3 typ	1	3	40
4	45	2N6121	2N6124	25/100	1.5	0.4 typ	0.3 typ	1.5	2.5	40
	60	2N6122	2N6125	25/100	1.5	0.4 typ	0.3 typ	1.5	2.5	40
	80	2N6123	2N6126	20/80	1.5	0.4 typ	0.3 typ	1.5	2.5	40
	300			6/30	3	3	0.7	3	4	60
	400			6/30	3	3	0.7	3	4	60
5	60	TIP120†	TIP125†	1k min	3	1.5 typ	1.5 typ	3	4**	65
	80	TIP121†	TIP126†	1k min	3	1.5 typ	1.5 typ	3	4**	65
	100	TIP122†	TIP127†	1k min	3	1.5 typ	1.5 typ	4	4**	75
	250	MJE51T		5 min	5	2 typ†		2.5	2.5	80
		2N6497#		10/75	2.5	1.8	0.8	2.5	5	80
	300	MJE52T		5 min	5	2 typ†		2.5	2.5	80
		2N6498#		10/75	2.5	1.8	0.8	2.5	5	80
	350	MJE53T		5 min	5	2 typ†		2.5	2.5	80
		2N6499#		10/75	2.5	1.8	0.8	2.5	5	80
6	40	TIP41	TIP42	15/75	3	0.4 typ	0.15 typ	3	3	65
	60	TIP41A	TIP42A	15/75	3	0.4 typ	0.15 typ	3	3	65
	80	TIP41B	TIP42B	15/75	3	0.4 typ	0.15 typ	3	3	65
	100	TIP41C	TIP42C	15/75	3	0.4 typ	0.15 typ	3	3	65
7	30	2N6288	2N6111	30/150	3	0.4 typ	0.15 typ	3	4	40
	50	2N6290	2N6109	30/150	2.5	0.4 typ	0.15 typ	3	4	40
	70	2N6292	2N6107	30/150	3	0.4 typ	0.15 typ	3	4	40
8	40	2N6386†		1k/20k	3				20**	65
	60	2N6043†	2N6040†	1k/10k	4	1.5 typ	1.5 typ	3	4**	75
		TIP100†	TIP105†	1k/20k	3	1.5 typ	1.5 typ	3	4**	80
	80	2N6044†	2N6041†	1k/10k	4	1.5 typ	1.5 typ	3	4**	75
		TIP101†	TIP106†	1k/20k	3	1.5 typ	1.5 typ	3	4**	80
	100	2N6045†	2N6042†	1k/10k	3	1.5 typ	1.5 typ	3	4**	75
		TIP102†	TIP107†	1k/20k	3	1.5 typ	1.5 typ	3	4**	80
	120	●MJE15028	●MJE15029	40 min	3				30	50
	150	●MJE15030	●MJE15031	40 min	3				30	50
	300			6/30	5	3	0.7	5	4	80
	400			6/30	5	3	0.7	5	4	80
10	60	MJE2801T	MJE2901T	25/100	3					75
		MJE3055T	MJE2955T	20/70	4					75
		2N6387†		1k/20k	5				20**	65
	80	2N6388†		1k/20k	5				20**	65
		●D44H10	●D45H10	20 min	4				50 typ	50
		●D44H11	●D45H11	40 min	4				50 typ	50
12	300			6/30	8	3	0.7	8	4	100
	400			6/30	8	3	0.7	8	4	100
15	40	2N6486	2N6489	20/150	5	0.6 typ	0.3 typ	5	5	75
	60	2N6487	2N6490	20/150	5	0.6 typ	0.3 typ	5	5	75
	80	2N6488	2N6491	20/150	5	0.6 typ	0.3 typ	5	5	75